In This Issue

Environmental Health Science at Wayne State University

The NIEHS News (p. A60) highlights the work of the Environmental Health Science Center at Detroit's Wayne State University. Far from being an academic "ivory tower," the Wayne State EHSC grapples daily with urban environmental health issues in one of the United States' most grievously polluted cities.

At the Edge of the Earth

Vast, wintry, and isolated, the Arctic is the hapless dumping ground for a surprisingly large array of pollutants that drift to the region from the industrialized countries farther south. The **Focus** article (p. A64) investigates the state of the Arctic's environmental health, in particular its impact on the region's indigenous population, and examines some possibilities for promoting sustainable development and protecting this region from further damage.

American Indians and Environmental Law

The **Spheres of Influence** article (p. A70) examines the complex situation surrounding environmental health policy as it applies to American Indians and Indian country. After a century of treaties in which the Indians' relationship with the earth—a key aspect of their culture—has been savaged in the name of assimilation, American Indians are taking charge of determining and administering environmental regulations and policies on tribal lands to ensure a safer and more sovereign future.

The Matter of Mercury

Removing mercury from the waste stream has presented a challenge ever since the birth of the Industrial Age, when the metal first became a serious environmental health problem. Now, scientists at the Pacific Northwest National Laboratory in Richland, Washington have devised a method, described in the **Innovations** article (p. A74), for adsorbing not only mercury but also many other toxic metals from a liquid waste stream.

Potential for Dredging to Pollute Atmosphere

Chiarenzelli and Scrudato (p. 47) suggest that a variety of soil contaminants (dioxins, dibenzofurans, chorinated pesticides, polyaromatic hydrocarbons) with physicochemical properties similar to PCBs could potentially be released into the atmosphere by volatilization and evaporation during remediation or dredging operations of wet soils.

Pesticides, Immunity, and Public Health

A commentary by Acquavella et al. (p. 51) questions some of the conclusions in the World Resources Institute report on "Pesticides and the Immune System: The Public Health Risks," and at the same time lauds it for focusing attention on immunotoxicity as an important issue for future research. A retort by the WRI can be found in **Correspondence** on page A 52.

Trihalomethane Exposure in the Shower

Methodological improvements in epidemiology studies that investigate THM exposure in drinking water, showering, and bathing are reported by Shimokura et al. (p. 55). Questionnaires and diaries quantitated potential exposure to THM and can be used to prevent underestimation of the potential association between THM exposure and health.

Effects of Maternal PCDDs/PCDFs/PCBs on Offspring

Polychlorinated dibenzo-*p*-dioxins, dibenzofurans, and biphenyls were assayed in 167 human milk samples from urban or rural areas in Finland by Vartiainen et al. (p. 61). Although there were differences in some of the contaminant levels between groups, these were apparently not associated with birth weights of either sex.

Genetic and Environmental Risk Factors for Cancer

Polymorphic metabolic genes can confer enhanced genetic susceptibility to certain environmental carcinogens and modify the risk associated with exposure. Taioli et al. (p.67) developed a model to analyze different dose effects. An analysis of epidemiological studies for this type of exposure–gene effect is illustrated by hypothetical data or examples from the literature.

UVB Radiation Affects Disease Resistance

A model of risk assessment for humans exposed to ultraviolet B radiation was developed by Goettsch et al. (p. 71). They report that 90 minute exposure of nonadapted, sensitive individuals could suppress specific T cell-mediated responses by as much as 50%. Further epidemiological research is needed to determine if specific immune suppression, demonstrable in rodent models, could actually lead to an increased pathogenetic load (lowered disease resistance) in humans.

Intervention for Lead Toxicity in Children

Education and intervention programs at an active lead smelter in Canada resulted in significant declines in blood lead in children living nearby (Hilts et al., p. 79). Education and dust control aimed at high risk children were effective intermediate remedial measures for reducing lead exposure while major source control measures at the mining site are being implemented.

Can Plant Estrogens Modify Female Hormones?

Plant estrogens competitively inhibit enzymes in women that convert androgens to estrogens. Kao et al. (p. 85) conducted enzyme inhibition studies, and combined with computer modeling, demonstrated the molecular basis for the type and extent of enzyme inhibition by the plant phytoestrogens flavone and isoflavone.

Ozone Effects on Pulmonary Function

The acute effects of ozone, fine particulate matter, and aerosol acidity on pulmonary function in adult hikers were determined by Korrick et al. (p. 93). Hikers with asthma showed a fourfold greater responsiveness to ozone than others and also exhibited greater air-pollution changes in pulmonary function.

Erratum

The **Focus** article on childhood cancer that appeared in the January 1998 issue of *EHP* ("Childhood Cancer: A Growing Problem," 106:A18–A23) erroneously stated that childhood cancer rates appear to be increasing at the rate of approximately 10% each year. The estimated rate is actually 1.0%. *EHP* regrets the error.